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AFFECTIONS OF THE EYE AS A CAUSE OF HEADACHE.

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[Written by request for the Louisville Medical Society.]

The above subject is, in my estimation, an extremely important one. Such affections not only produce headache, but have often as a result, vertigo, nausea, inability to apply the mind, mental depression and irritability of temper, insomnia, loss of appetite, and fear of some impending danger. To Dr S. W. Mitchell we are indebted for first calling our attention to these facts.

Headaches, as the result of errors of refraction and accommodation, insufficiency of recti and oblique muscles, conjunctivitis, etc., are very common. By errors of refraction and accommodation, I mean near-sightedness, over sightedness, astigmatism, presbyopia or failure of sight from age, and spasm of accommodation. Affections of the eye other than these mentioned may cause headache, but the above are more frequently accompanied by this symptom.

The first question that presents itself in this connection is, How do these affections cause headache? Is it through the sensory nerves, or (if I may be allowed the expression) what is the channel of communication? I believe that in these affections the channel through which the disturbing impulses pass is the same as that by which genital irritation causes convulsions, etc. — the stomach, in certain conditions, produces aural tinnitus and vertigo, or a decayed tooth brings about middle-ear inflammation—that is, the sympathetic system of nerves. Take, for instance, a diseased or

over-fed stomach; where is the channel of communication between this viscus and the internal ear? "It is established," so says Woakes, "through the pneumogastric nerve and the lower cervical ganglion, by means of a fasciculus given off by the former at about the point where the recurrent laryngeal leaves the trunk of the nerve. That the course of this branch is from the stomach to the ganglion will be plain when it is remembered that vaso-motor fibers associated with cerebro-spinal nerves pursue an opposite course to the latter. When it is further remembered that nerves entering a ganglion break up and communicate with its corpuscles, by which means they contract new relationships with other nerves entering the ganglion, it will not be difficult to understand how the stomach is brought into relationship with the labyrinth. There can, I think, be no doubt that this correlation is effected in the inferior cervical ganglion through the medium of the communication just noted between the pneumogastric and this ganglion, impressions passing along which become in it transferred to the inhibitory nerves furnished to the vertebral artery from the ganglion."

Occipital headache may be produced through this same channel. This wave of vaso-dilatation passing to the vertebral, to its branches supplying the medulla oblongata and other portions of the base of the brain, on through the internal auditory artery, thus produces the occipital headache with tinnitus (pulsating noises) and vertigo.

Or, again, taking the decayed tooth: Here we have communication through the inferior dental nerve which enters the otic ganglion. The nervi vasorum constituting the carotid plexus come largely from the otic ganglion. The drum membrane gets a large portion of its blood supply from an artery that leaves the internal carotid as it passes through the carotid canal. The com-

munication between vaso-dilators, as will be seen, is here very close. I have had cases of suppuration of the middle-ear to arise from decayed teeth which resisted all treatment, recovering only after the original cause was removed. Having established, I think conclusively, these connections, let us refer to the chief object of this paper.

Are headaches often the result of affections of the eye; and if so, how are they produced? I shall not discuss the many affections of the eye which may produce headache, but shall take for illustration only one. Since the channel of communication is about the same in all, I shall therefore call your attention to the disorder of vision which is a common cause of headache, namely, hypermetropia or oversightedness. I shall endeavor in what follows to use as few technical terms as possible, so that no one may fail to understand me. Ophthalmic names are almost as difficult to pronounce and understand as those of dermatology; and, as none but a professional dermatologist would pretend to understand its nomenclature, I have no right to assume that many among the general practitioners of medicine have taken the trouble to master the technique of my specialty.

By a hypermetropic or over-sighted eye, I mean an eye with its antero-posterior axis too short, or its refractive media too weak, so that the focus is formed behind the eye, or rather no focus is formed at all, as the coats of the eye are opaque. Here I must speak of accommodation. By this term is meant the power that enables us to see both distant and near objects. If I hold an object close to me, and fix my eyes upon it, I see it distinctly, but all things beyond it are blurred: again, fixing my eyes on a distant object, the near one is seen indistinctly. Of course the eye, in fixing on the two objects, has undergone some change. This change is called accommodation. Whether this power resides in the ciliary muscles, the crystalline lens, or the choroid, or whether all of them are concerned in the phenomenon, is of no consequence to us in the consideration of this subject. That it is muscular, there can be no doubt. Referring back to the definition of the hypermetropic eye, I said that in it the focus is too far back. For such an eye to get distinct vision the focus must be brought forward so as to fall upon the sensitive plate, the retina; to accomplish this object the refractive power of the eye must be made stronger; for this

we depend upon the crystalline lens. And just here lies the cause of the difficulty. Such an eye as I am now speaking of, in consequence of its shape, is under a constant strain; even to see distant objects distinctly its accommodating power has to be called into play, which is not the case in an emmetropic or normal eye. Such an eye (hypermetropic) in fact is never at rest, unless its owner be asleep. When a person thus afflicted undertakes to read, or do other close work, he has to not only accommodate as much as a person with properly shaped eyes, but enough in addition to overcome his hypermetropia also: we here in fact get the same effect as would be noticed if the person should undertake to carry all day long some weight which was too heavy for him, namely, fatigue. This fatigue to the eyes is the result of this extra work of the accommodation, or rather the extra work itself, calls for an increase in the blood-supply of the parts concerned. This demand, in the form of a nerve impulse, is reflected to the brain and spinal cord through the sympathetic system, producing in these centers a congestion with accompanying headache and not infrequently spinal irritation. Let us now trace out the channel of sympathetic communication here brought into service.

The medulla oblongata or the crus cerebri is generally considered the center of the sympathetic system. The fibers which come from the brain pass down into the cord, and join those coming from the latter. The bundles extending into the first and second cervical nerves pass into the cervical portion of the thoracic ganglia. These inclose the carotid, and some pass with the carotid into the cavity of the skull, others passing over from the cavernous sinus into the cavernous ganglion. Here they unite with the fibers emanating from the brain direct, and radiate in the fifth pair of nerves. The first branch of the fifth also gets some fibers from the carotid plexus; so here the communication is double. This first branch divides into three branches, the third branch of which, or what is known as the nasociliary, is the one which is concerned in the present case. This nerve sends branches to the ophthalmic, lenticular or ciliary ganglion. This ganglion has three roots, the one just spoken of coming from the nasal branch of the first division of the fifth, the second a branch of the third; the third, its sympathetic root, a slender filament of the cavernous plexus. The short ciliary

nerves which enter the posterior portion of the eye are its branches of distribution; they supply the iris and ciliary body. Stellwag says, "It is clear that when there is a morbid process (in this instance it is over-work) going on in the interior of the eye those variations must have some effect upon its circulation and nutrition; since each muscular contraction brings with it increase in assimilation, it may produce severe irritations in the sensory nerves."

Having established this close communication between the eye and the spinal cord and the brain, can any one deem it impossible for such affections of the eye as hypermetropic myopia, weakness of recti and oblique muscles, conjunctivitis, retinal hyperesthesia, etc., to produce headache? I have seen many cases illustrative of this condition; they are of almost daily occurrence in practice. One case (Miss J. J.) had a headache of fourteen years standing which was promptly relieved by glasses; Mrs. H. had a headache for twenty years, and Mr. M. one which had lasted for twenty-seven years; these were also relieved by glasses. I received a letter of inquiry from Clarksville, Tenn., last week, from a gentleman who has had headache nearly all his life; he was relieved temporarily by Dr. Hammond, who treated him for cerebral hyperemia. Judging from his symptoms, I believe it to be what might be called an eye headache. The difficulty is worse when he uses his eyes for close work. After leaving Dr. Hammond he was well until he resumed his close work, when the whole difficulty returned.

In the case referred to as having had headache for twenty years, atropia gave relief. As soon as accommodation was paralyzed she found respite from headache, and this continued from the time she commenced wearing her glasses. I have seen chorea, nausea, cerebro-spinal irritation, with many other affections, result from errors of refraction and accommodation. A family of three—a mother and two daughters, from Nashville, Tenn.—were in my office this morning. All three had astigmatism and were subject to constant headache. This disturbance more often results in cases with small or medium degrees of errors of refraction than in those where the condition is more marked; scarcely ever does it occur in the higher degrees. This is readily explained. Any one having a very high degree of hypermetropia is soon convinced that he can not overcome

it, no matter what effort he may make. As soon as all effort to overcome the defect ceases, the cause, strain on accommodation and the internal recti ceases.

I have already referred to this subject in another article, written some four or five years ago, but inasmuch as it is not generally understood by the profession at large, and as some are disposed to doubt the fact that disturbances of refraction may produce headache, I am glad of this opportunity to carry the information to those to whom it may be unknown, with the hope also that I shall succeed in converting some of the unbelievers.

LOUISVILLE, KY.

Miscellany.

NO HEALTHY CHILDREN.—I said in my address at the Health Congress at Brighton what was quite true, that I had never in my life seen a child so healthy that it had not in it some actual or latent constitutional disease. Touching the subject now in hand, it is equally true to say that it is all but impossible to find in the board schools of our large towns any semblance, critically viewed, of health. Constitutional taints, which under favorable circumstances may often be concealed, and which may or may not be apparent, are there. Various conditions of disease are there independently of the tendency from heredity; there, of themselves, in some irregularity of function, in some shade of mental aberration. The field of disease which is presented in some of the schools situated in crowded localities is indeed a sight at once for anxiety and pity. To the eye of a physician who, like myself, has spent many years in hospital practice, it tells a story which is absolutely painful, if he permits the result to be calculated out of his mind at leisure hours; if, that is to say, he compares what he has witnessed in his survey with what he has learned from long observation of the meaning of the phenomena in the history of life. It is not necessary for him to strip the children, percuss and sound the chest, examine the spine, or practice any of those refined arts of the diagnosis with which he is familiar. He reads from the indications of temperament, of expression of countenance, of color of skin, of poise of limb, of build of body, of gait, of voice, sufficient outward manifestation to discern what is the true physical state, what

is the stamp and extent of the disease, what is the vital value of the lives generally that are before him. Tell the physician those lives are to be valued for some monetary purpose as they stand and as they are to go on, according to the present system, and he will give in brief time an estimate of value which the keenest man of business might readily accept and act upon.—*Dr. B. W. Richardson.*

HEALTH APHORISMS.—The lives of most men are in their own hands, and as a rule the just verdict after death would be *felo de se*.

Light gives a bronzed or tan color to the skin; but where it uproots the lily it plants the rose.

Mold and decaying vegetables in a cellar weave shrouds for the upper chambers.

A change of air is less valuable than a change of scene. The air is changed every time the direction of the wind is changed.

Calisthenics may be very genteel, and romping very ungenteel, but one is the shadow, the other the substance of healthful exercise.

Blessed be he who invented sleep; but thrice blessed the man who will invent a cure for thinking.

Milk drawn from a woman who sits indoors and drinks whisky and beer is certainly as unwholesome as milk from a distillery-fed cow.

Dirt, debauchery, disease, and death are successive links in the same chain.—*Dr. Frank H. Hamilton.*

SORE THROAT AND ALBUMINURIA.—There are many authorities who contend that the simplest form of sore throat is a mild diphtheria—that even the most innocent case of the former disease is accompanied by a contagion, giving frequently rise to severe cases of diphtheria, and that in either case micro-organisms are the pathogenic cause can not be doubted. Dr. Laure (*Deutsch. Med. Zeit.*, 1, '83.) has published a series of cases where sore throat was complicated by albuminuria. Such observations have recently also been made by the great clinician Leyden, who noted nephritic disturbances and even paralysis following simple sore throat where diphtheritic patches had not been present. Laure supposes that in his cases there existed a catarrhal co-affection of the kidney-epithelium. It is also possible that the complication was a so-called elimination-nephritis, viz., in most infectious diseases in consequence

of the obstruction to the circulation by the microbes filling up the lumen of the capillaries, further due to the disturbed process of filtration in the glomeruli and the altered blood-pressure; first congestion and then inflammation of the kidney ensues, causing the presence of albumen and tube-casts in the urine. It follows that we should pay attention to the kidneys even in the simplest case of sore throat.—*Med. and Surg. Reporter.*

FIRST IDEA OF THE TELEPHONE.—The following lines, brought to the attention of M. de Parville by Prof. Egger, are extracted from the book "*Incredulité et Mescrance du Sortilège*," by P. de l'Ancre, published at Paris in 1662; *De la Divination*, 5^e tome traité:

"It is reported that a German communicated to King Henry the Great an astonishing secret, through which men far apart might understand each other by means of the magnet. He at first rubbed together (*frotta*) two magnetic needles, and then attached them separately to two clocks, about the dials of which were written the twenty-four letters of the alphabet. When one needle was moved to a letter of the alphabet the other, no matter how far away, moved to the same letter. The king, perceiving how dangerous the secret might become in transmitting information to besieged cities, forbade its publication."—*Med. and Surg. Reporter.*

AN AUSTRALIAN OBITUARY.—We extract from the Australasian Medical Gazette the following. The dead are not hurt as are the living by caustic strictures, and a dead doctor may thus be utilized as a warning to his living brothers. Possibly some of the readers of the NEWS may be personally benefited by considering the late Mr. Thomson's faults, or may know of some one who might be profited by their perusal:

The death of Mr. William Thomson, of South Yarra, is necessarily an event not to be passed over without mention. I wish I could say that he had gone to his grave with every body's regret; but he had lived in his professional life in such perpetual antagonism with those of his own calling, that it would be untrue to say that their regrets followed him to his resting place. That he had considerable ability no one denies; but he had such an *overmastering vanity*, and such an *irascible temper*, that it was a *virtual impossibility for any average human being to continue long on friendly terms with him*. No

doubt these faults were in the nature of great misfortunes to him; but they were, equally, misfortunes to those who had dealings with him. *He looked upon a difference of opinion as an affront, and he resented it as such.* He was a voluminous writer, and he claimed to have made some discoveries; but these fancied discoveries were only in the nature of ruminations of the scientific aliment with which others had supplied him, and he was furious when he was told that this was so. He might have been very useful if he had been content to work side by side with his fellow-practitioners; but he *would not recognize equality, but affected to discover only inferiority in those about him; and it is not in human nature to submit to arrogant assumption, even when there is some reason at the back of it.* So it happened that he became alienated from nearly every one in the profession. We bear him no malice; we wish it could have been otherwise; but it was solely his own fault that it was not otherwise, and so *requiescat.*

CATARRH OF THE NASO-PHARYNX. — Dr. Morell Mackenzie, in a lecture at the London Hospital Medical College (British Medical Journal), arrives at the following conclusions relative to the cause of post-nasal catarrh in America: The universal prevalence of catarrh is, indeed, fully explained by the abundance of dust, both in the country and in the cities. Owing to the immense size of the country and its sparse rural population, the country roads have not, as a rule, been properly made and, except in some of the older States, are merely the original prairie tracks. In the cities, notwithstanding the magnificence of the public buildings, the splendor of many of the private houses, and the beauty of the parks, the pavement is generally worse than it is in the most neglected cities of Europe; such, indeed, as are only to be found in Spain or Turkey. It must be recollected also that, while in the decayed towns of the Old World there is very little movement, in the American cities there is a ceaseless activity and an abundance of traffic. Hence, the dust is set in motion in the one case, but not in the other. The character of the dust of course varies greatly according to locality. In some parts it is a fine sand, in others an alkaline powder; while in the cities it is made up of every conceivable abomination, among which, however, decomposing animal and vegetable matters are not the least irritating elements. An

idea may, perhaps, be formed of the state of the atmosphere, from a consideration of the fact that in many cities the functions of the scavenger are quite unknown.

That a dusty atmosphere is the real cause of post-nasal catarrh is rendered probable by a consideration of the anatomical relations of the naso-pharynx. For, owing to its being a *cul-de-sac* out of the direct line of the respiratory tract, particles of foreign matter which become accidentally lodged in its upper part are got rid of with difficulty, most likely by an increased secretion, which, as in the case of the conjunctiva, washes away any gritty substance which may temporarily alight on the membrane. As regards the larynx, irritating dust is expelled by coughing, which may be either reflex or voluntary; and again, in the case of the nasal passages, the minute particles of matter which constitute dust are expelled, if they happen to be obnoxious, either by sneezing or blowing the nose. But reflex acts, such as coughing and sneezing, have no effect on the upper part of the naso-pharynx, and it is only by a voluntary act, known as "hawking," that this cavity can be partially cleared. It is probable also, that, owing to the sensibility of the nasopharyngeal mucous membrane being less acute than that of either the nose or the larynx, minute foreign bodies accidentally lodged in the vault of the pharynx do not cause an amount of discomfort at all corresponding to that in the adjacent parts; hence, particles of matter are more likely to remain *in situ* for a long time in the post-nasal region than in either of the other parts, and are, of course, very apt to set up disease. In this country the complaint is most common in persons whose pharynx is large in the antero-posterior direction, a form of throat which facilitates the entrance without favoring the expulsion of foreign particles.

The importance of heredity in the etiology of catarrh has been recently strongly insisted on by Bresgen, and, although no extensive series of exact observations have yet been made on this point, there is every probability that a disposition to catarrh may be inherited. I have seen so many instances, however, in which foreigners making a short stay in America have become affected with post-nasal catarrh, that I think there is little doubt that atmospheric conditions—and those, let me add, of an accidental and controllable character—are much more powerful than heredity.

A NOVEL UTERINE SUPPORTER.—Holman S. Humphrey, M.D., of Janesville, Wis., in the Medical Age:

Amylum, } aa3j;
 Sacch. alb., }
 Finely pulv. chloride of sodium, . . 3j.

M. Triturate thoroughly and put in a bottle; cork tightly.

With the patient placed in a good light, replace the uterus and introduce a long glass speculum of as large a diameter as can easily be used; then with a spatula place one or two drams of the powder within the speculum, and, using a cotton swab, carry the powder up and pack Douglas cul-de-sac and all around the neck of the uterus with it, and as the speculum is slowly withdrawn, starch the entire mucous membrane of the vagina. This will effectually prevent the uterus from descending through the vagina, and gives wonderful support to the vaginal walls, aids in curing leucorrhea, and last, but not least, is an effectual bar to intercourse, and thus would become a great boon to many suffering women if generally used. Ordinarily the operation should be repeated twice weekly, but if there is profuse leucorrhea, it must be done oftener, and, before applying, the vagina should be well cleansed with syringe and warm soap-suds. I have used this powder a great many times during the past ten years, and find it not only the best uterine supporter in prolapsed conditions, but also a direct tonic to the debilitated structures as well. The combination can not become detrimental by remaining several days within the vagina; the chloride seems to prevent decomposition.

SOME CURIOUS OBSERVATIONS.—Dr. S. E. Cully writes, in the American Journal of Obstetrics: When the orgasm in the female takes place, there is an erection of the clitoris, and so long as the orgasm continues its muscles contract as regularly as do those of the male in the act of emission of semen; at the same time the whole machinery of the muscles of the uterus is put in motion, it (the uterus) sways from side to side, its whole body rises and falls from an eighth of an inch to a quarter, and the annular muscles of the cervix can be distinctly felt contracting. Does the uterus emit any thing in the act? Before an orgasm is induced every particle of mucus may be washed from the vagina, a rubber cap may be placed over the cervix, and when the act is over, if it be removed it will be found to contain from a

half to a dram of transparent semi-fluid substance resembling the white of an egg. I am not in a position to say what this secretion or excretion is, or whether it comes from the uterus or not. That it is there after an orgasm I know, that the uterus and clitoris act as above indicated, I likewise know, and, in my opinion, the prompt occurrence of this fluid would seem to show how rapid may be the pathological results of masturbation in the female. My experiments have been conducted with great care, taking into consideration all secreting glands in the neighborhood. The vagina was thoroughly washed, the cervix was cleared, and a close-fitting rubber ring, with a cul-de-sac attached, covered the cervix when collecting the fluid during an orgasm. Several times no ring or sac was used, and my index finger was placed against the most dependent portions of the cervix on these occasions, so as to be able to carefully detect every motion of the organ, while my thumb was in contact with the clitoris. If the act of masturbation brings into play so many forces, and if the orgasm is being constantly induced, it can be readily understood how it happens that soon a dangerous train of symptoms is set up that an unsuspecting physician may find it very difficult to control.

RETENTION OF CATHETER IN FEMALE URETHRA.—Dr. C. H. Hunter, of Minneapolis, Minn. (American Journal of Obstetrics), relates the following: The accident happened in a case of ovariectomy performed in a country village by Dr. Hill, of Augusta, Me. The patient was left in my charge, with directions to draw the water for the first few days. Every thing went well till the third day, when, on attempting to withdraw the catheter, I found, much to my consternation, that with all the traction I dared use, it would not come. What to do I did not know. All my books were explicit on how to introduce the catheter; on how to take it away, not a word. A telegram to Dr. Hill brought by return express a catheter, the half of which had been cut away lengthwise, and one end thoroughly sharpened, with directions to pass the sharpened end along the imprisoned catheter till the obstruction should be reached, then to bring away the instrument with a sudden jerk. This I did very easily, but not until after the patient's demand that she be given ether had been complied with. No bad symptoms whatever followed. The patient made a good recovery.

Before the operation the woman had been tapped thirty times, during which she had become tolerably familiar with ether, so the giving of it may not have been so rash as otherwise it would appear. The patient told me that a few years before a doctor, in attempting to draw her water, had got his instrument caught in the same way, but that he had torn it out at once, hurting her very much, after which she was sick for several days.

It would appear, then, that Dr. Hill's ingenious use of a split catheter is the safest way out of such an accident. It is needless to add that I took my catheter to the nearest jeweller, and had the eyelets filled with a plate pierced by a number of small holes, since which it has got me into no such disagreeable dilemmas as on the above occasion.

THE NECESSITY FOR HOLIDAYS.—That a holiday is a necessity, and not merely a luxury, is a fact which it especially behooves members of our hard-working profession to remember in the regulation of their own lives, as well as in their dealings with their patients. (The British Medical Journal.) For the brain-worker, periodical remission of accustomed toil has always been a necessary condition of continued vigor; for him, the heightened tension of modern life has especially accentuated the need for occasional periods devoted to the recreation and re-accumulation of energy. The cogent physiological principles and practical purposes of systematic holidays are generally admitted. All workers, if they are to last, must have holidays. For some persons, and for some occupations, frequent short holidays are best; with other natures, and in other circumstances, only comparatively long periods of release from routine are of service. Few real workers, if any, can safely continue to deny themselves at least a yearly holiday. Mere rest that is mere cessation from work, while it is better than unbroken toil, does not recreate the fairly vigorous so thoroughly as does a complete change of activity from accustomed channels. For the strong worker, either with brain or muscle, diversion of activity recreates better than rest alone. The whole body feeds as it works, and grows as it feeds. Rest may check expenditure of force, but it is chiefly by expending energy that the stores of energy can be replenished. We mostly need holidays because our ordinary daily life tends to sink into a narrow groove of routine exer-

tion, working and wearing some part of our organism disproportionately, so that its powers of work and its faculty of recuperation are alike worn down. In a well-arranged holiday, we do not cease from activity, we only change its channels; with such change, we give a new and saving stimulus to assimilation, and the transmutation of its products into force. As a rule, the hardest workers live longest, but only those live long who sufficiently break their wonted toil by the recreating variety of well-timed and well-spent holidays.

A PIONEER IN MODERN PATHOLOGY.—Alexander Patrick Stewart, M.D., F.R.C.P., died in London, July 17th, at the advanced age of seventy years. From a sketch of his life, in the Medical Times and Gazette, it appears that he was one of the first to observe and teach the non-identity of typhus and typhoid fever. "His paper, entitled 'Some Consideration on the Nature and Pathology of Typhus and Typhoid Fever, applied to the solution of the question of the identity or non-identity of the two diseases,' appeared in the Edinburgh Medical and Surgical Journal for October, 1840. The essay was read before the Parisian Medical Society on April 16th and 23d of that year; and it is quite possible that the attention paid to it in this country would have been greater had it been read—like the paper on the same subject by Sir (then Dr.) W. Jenner, in 1849—before the Royal Medical and Chirurgical Society. The clear, logical, and simple statements of fact in Jenner's paper succeeded in doing what neither Stewart nor others had done, viz., in convincing medical men upon the absolute dissimilarity in cause, symptoms, and pathology between these two affections; and the conclusions, somewhat hesitatingly drawn by Stewart in 1840, were irresistibly established by Jenner in 1849. It must also be remembered that, for several years before Stewart's paper, suggestions and facts were being presented, all tending to the same end; while, in particular, the anatomical researches of Chomel and his pupils were demonstrating the occurrence of intestinal lesions in a certain proportion of cases of fever, which was called "typhoid," but not then clinically distinguished from the general type of typhus. In Glasgow, Stewart must have gained from Dr. Perry some of the ideas which he afterward elaborated so thoroughly; for there can be no doubt that Dr. Perry did teach, although necessarily in but a tentative man-

ner, the existence of the two types of fever, and published a paper on the subject in 1836; and even in Philadelphia the same doctrines were being also taught by Dr. Gir-lard. The appearance of Stewart's paper ought, then, to have had a more decided influence upon the question which was agitating medical thought in all parts of the world than it did; and, perchance, if he had drawn his conclusions with a bolder hand, such might have been the case. The essay begins with an allusion to the difficulties that beset the question and the controversy then being raised about it; and then the author goes on to point out how, when he was at Glasgow, he was struck with the occurrence of two distinct classes of cases of fever—the one marked by its severity, rapidity, and absence of all local lesions; the other running a more protracted course and mostly characterized by such lesions—and he then proceeds to discuss various points of difference systematically, showing that the causes of typhus were far better known than those of typhoid, and holding it to be doubtful whether the latter really depended on a specific poison, and if so, whether the poison was or was not generated under the same condition as that of typhus. Some cases of typhoid fever are given to illustrate the general clinical course of the malady; and then he dwells at considerable length upon the symptoms, analyzing them in a most exhaustive manner. In this way he demonstrates the abdominal characters of typhoid fever, and clearly describes the difference in the eruption of typhus and of typhoid. The crowning distinction is made by the demonstration of the invariable presence of intestinal lesions in cases marked by typhoid characters clinically, and the absence of such lesions in the purely typhus cases. A few paragraphs enforce the lesson of the different lines of treatment to be applied in each variety of fever; and, with pardonable diffidence, Dr. Stewart thus sums up: 'On a review, then, of all that has been advanced, it would appear that typhus and typhoid fever present important differences as regard their probable origin, their proximate causes, their course, many of their symptoms, their diseased appearances, and the treatment applied in each. Are they, then, identical, or are they not? I feel that it would be presumptuous in me to hazard a direct reply; nor do I demand an answer in the affirmative merely on the faith of what I have stated. All I can ask or wish for is careful, extensive, and minute inquiry, with-

out prepossession or love of system, and a satisfactory solution must soon be arrived at.' We have dwelt at length upon this fruit of his early labors because we feel that it is by this work that Patrick Stewart in the future will be most remembered; because in his lifetime the essay seemed to be unknown to many or forgotten by others; and because of the regret that he did not himself continue the researches which he left to others to complete.

WOUND OF THE THORACIC DUCT.—M. Bøgehold, when assistant to Wilms, saw, during the extirpation of a tumor of the neck, a milky liquid flow from the wound, which proved to be chyle, and without doubt came from the thoracic duct. The wound was tamponed and the flow arrested. The patient recovered, but subsequently had a return of the tumor in the same place, which, on examination, proved to be carcinomatous. Bøgehold has not been able to find a similar example in medical literature.—*Gaz. Med. de Paris*.

DISEASED MEAT.—A cow-jobber was prosecuted for having on his premises the carcase of a cow in an extremely diseased condition, but dressed for food. The meat had been previously condemned, and buried in quick lime; but the defendant at night exhumed the carcase, and was detected carting it away by the police, who took charge of it for the second time. He was committed to prison for three months, the Bench regretting that the act precluded the imposition of hard labor.—*Med. Times and Gazette*.

YELLOW FEVER.—There were twenty-nine deaths from yellow fever in Havana for the week ending August 11th. The disease in Pensacola, Fla., seems to be limited to a few cases in the navy-yard. The city is protecting itself by means of a cordon, and little or no apprehension of an invasion is entertained by the authorities.

ESMARCH's bandage was considered new, but Prof. Maconi, a hundred years ago, made use of exactly the same process for the purpose of emptying the blood-vessels of blood, and Galen did the same before amputations.

J. B. LIPPINCOTT, & Co. announce that the THIRD VOLUME of Agnew's Surgery, which brings this great work to a close, will be ready on September 1st.

FISH AS FOOD.—Sir Henry Thompson recently delivered a lecture on Fish as Food. It was an able summary of the known facts about fish, but Sir Henry went too far in his denunciation of the notion that fish eating increases brain power as a "complete fallacy." (The Lancet.) It has long been perfectly well known to physiologists that the phosphorus theory must be discarded, but it is a fact beyond dispute that fish is a form of food which is easily digested and proves especially nutritive to the bodies of brain-workers. Sir Henry Thompson thinks that the only way it acts is by putting a man's body into proper relation with the work he has to do. This may be quite true, and doubtless is so, but the brain is an integral part of the body. Moreover, it comprehends a considerable number of the most important centers of the nervous system, whence the body as a whole derives its power. Therefore, in putting a man's body in proper relation with his work, fish may chiefly act by supplying his nervous system with specially available nutriment.

KEEPING FLOWERS IN A BED-ROOM.—Dr. Reklam, of Berlin, has expressed the opinion that the indispositions, in the shape of uneasy sleep, headache, etc., which are sometimes found to result from keeping flowers all night in a bed-room, do not arise from any special properties of the flowers. The effect is analogous to that produced on the eyes and ears by excessive light and by loud sounds, being, in fact, caused by a continual strain on the olfactory nerves. More or less similar consequences arise, it is remarked, from a bright light being kept burning in a bed-room, or from the noise of the wind or of vehicles passing by, the brain being disturbed from its wonted rest by these external influences. The moderate use of perfumes, it is argued, can not be regarded as injurious. — *Medical Times and Gazette*.

ALTITUDE AND DRYNESS AS A PROTECTION AGAINST CHOLERA.—During the last visitation of cholera which raged severely at Cairo, there was scarcely a case at Heloman, Egypt. This little town is situated on a plateau some two hundred feet above the valley of the Nile, nearly opposite the pyramids, and about ten miles from Cairo. It is connected with the capital by a railroad, and lies on the borders of the desert. There is, in consequence, no moisture there, while the extreme heat of the day is mitigated by

cool breezes, which always spring up in the desert at night. It is a bathing-place famous for its sulphur springs. — *Med. Times and Gazette*.

CHARACTERISTIC CRYSTALS IN LARD AND TALLOW.—Dr. W. T. Belfield has discovered that by dissolving fats in ether and allowing them to crystallize out, crystals characteristic of lard and tallow can be obtained. The lard crystals are rhomboidal plates with bevelled ends, while those of tallow are plume-shaped and curved like an italic letter *f*. This discovery will doubtless prove of value, by enabling the microscopist to distinguish for those interested the difference between pure lard and that which has received an admixture of stearine from the oleomargarine factories.

A CONSIDERABLE increase of the cases of typhoid fever in Paris is reported. There were one hundred and twenty-two admissions to the hospital in the week ending the 30th June, against seventy-two the previous week; and the deaths were forty-one against thirty-six. — *Med. Times and Gazette*.

QUARANTINE AT SAN FRANCISCO.—Fearing the introduction of cholera from China and Japan, the Board of Health has adopted a resolution that all Asiatic ports be declared infected, and that all vessels arriving from these ports be quarantined until the fullest examination be made.

THE German Government sends this week a scientific expedition to Egypt, to examine into the origin, nature, and cause of the cholera now prevailing there, and to ascertain the best measures for preventing the spread of the disease.

THE Chicago College of physicians has been sued by a student who was promised a graduate's diploma at the end of one year's study. The faculty declines to keep the agreement, which was made, they say, by an individual teacher. — *Med. and Surg. Reporter*.

INFANTILE MORTALITY.—Fifty-five children died of measles and whooping-cough on board the steamer Hankow during her voyage from London to the Sandwich Islands. — *Med. Times and Gazette*.

THE FOURTH of the series of articles on cholera, by Prof. T. S. Bell, will appear in our next issue.

The Louisville Medical News.

Vol. XVI SATURDAY, AUGUST 25, 1883. No. 8.

LUNSFORD P. YANDELL, M.D., - - - } Editors.
H. A. COTTELL, M.D., - - - - - }

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VALUE OF PHYSIOLOGY IN THE PRACTICE OF SURGERY.

It will doubtless be conceded by all that no branch of science has contributed more to the advancement of practical medicine than physiology. The discovery of the circulation of the blood by Harvey, the unfolding of the phenomena of digestion by Beaumont and his followers, and the more recent investigations of the mechanism of the nervous system by many observers of our own time, have each in turn marked an epoch in practical medicine. Indeed it may be truthfully said that physiology has brought to light scarcely a fact relative to the phenomena of the human organism which has not been immediately seized on by workers in practical medicine and made to do service in the diagnosis or therapy of disease. In short, from a review of the literature of modern practice and therapeutics, it is evident that without physiology these branches of medicine would be little more than shrewd guess-work as to diagnosis and prudent empiricism in the treatment of disease.

But while the relation which physiology sustains to medicine is plain, its application to surgery is to many minds not quite so clear, and for this reason the details of the following case, with comments, which is

made the basis of a very instructive article by Mr. Wm. Savory, F.R.S., in the *Lancet*, will doubtless prove interesting. Some time ago a man was admitted into St. Bartholomew's Hospital with aneurism of the second and third portions of the right subclavian artery, Mr. Savory and other surgeons being in attendance. In discussing the plans of treatment open to the surgeon in this case, the question of placing a ligature on either the axillary or common carotid, or on both of these vessels, was considered, when it was discovered that pressure upon the carotid produced a marked diminution in the pulsations of the tumor, while pressure upon the axillary had but slight effect upon it. On this ground the ligature of the carotid was for a while generally approved, when, in demonstrating the effect of pressure on this vessel by physiological experiment, it became obvious that the sudden and striking reduction in the frequency of the pulsations of the aneurism was directly due to an effect produced upon the heart through irritation of the pneumogastric nerve. This explanation was not, however, accepted by all until the reduction, not only of the frequency, but also of the force of the pulsations, was clearly made out, and the truth of the proposition confirmed by the production of a like effect through pressure on the vessel of the opposite side.

Attention is called to the fact that this phenomenon was noted by Waller more than twenty years ago, who was able, by pressure of the fingers at the highest point of the neck behind the ramus of the lower jaw, to produce symptoms which were easily recognized as due to irritation of the vagus. The pulsations of the heart were first increased with a diminution of power; after this its action was retarded some four or five beats to the minute, and this was followed by syncope when the pressure was continued. In these observations Waller demonstrated by careful experiment that this effect on the heart could be brought about independently of pressure on the carotid, and also that the current of blood

might be completely interrupted without producing the symptoms herein enumerated.

Allusion is made, in passing, to the well-known dangerous experiment of Czermak, who, by pressing the vagus against a small osseous tumor in his neck, was able to stop the beating of his heart.

An observation to the point, made by Sir William Ferguson in 1841, and one which shows how physiology and surgery may be reciprocal in their relationship, is also noted.

In considering the question of an operation for the relief of aneurism of the innominate, in a case then under his charge, Sir William found that, while pressure on the subclavian outside of the scaleni muscles affected but slightly the pulsations of the aneurism, they were notably diminished by pressure upon the right common carotid, and that the pulsation ceased almost entirely when both carotids were pressed upon. The tumor rapidly diminished in size, and the skin over it became wrinkled.

The carotid was tied, in this case, for reasons based upon the anatomical relations of the aneurism, but not until after the surgeon had satisfied himself that stoppage of the blood-current in this vessel did not affect the aneurismal pulsations, as pressure on it had previously done.

Sir William supposed "that the pressure caused its peculiar effects by its influence on the brain and the action of the heart, or *vice versa*," without recognizing the influence of the pneumogastric nerve in the case.

It will be seen that while Sir William Fergusson was not able, at that early date, to reach the true interpretation of these facts, the value of the accurate record which he made of them stands demonstrated, as we read the history of this interesting case in the light of modern physiology. He was able to give a timely hint to the physiologist, which to-day stands discovered in a grand physiological fact, the recognition of which in the case above noted did, and in many others may, save the surgeon

from performing a useless and dangerous operation.

Though this article is longer than we intended, we can not but call attention to a few points which have suggested themselves in passing:

1. That while the cardio-inhibitory fibers of the pneumogastric respond readily to direct stimulation along the course of the nerve, from mechanical irritation, electricity, etc., or possibly from lesions or circulatory disturbances in the inhibitory center of the medulla, there is also reflex irritation to which it answers with equal readiness. This is familiarly demonstrated by crushing the frog's foot or striking the exposed mesentery or intestine, which immediately stops the heart in diastole. It is also illustrated in man through fainting under severe pain, and by other phenomena of shock.

2. That it is well known to the physiologist that atropia promptly paralyzes the cardio-inhibitory apparatus, permitting the heart for a time to do its work in spite of outside disturbances, and while advantage is often taken of this action of the drug by the physician in the treatment of opium-poisoning, and various pathological conditions which are wont to be accompanied by heart failure, it is given with the idea that it is a cardiac stimulant merely, its influence over cardiac inhibition being overlooked.

3. That while the surgeon makes use of the drug as a cardiac stimulant in relieving shock from injuries or capital operations, and recommends it even in forestalling the dangers of undue depression from chloroform or ether, it has never come into general use as a preventive of shock during surgical operations.

If the part played in the production of shock by reflex cardiac inhibition were more generally recognized, it is probable that no patient would be submitted to any major surgical operation until he had been put under the influence of atropia, since it is impossible to note the effectual manner in which this drug supports the frog's heart

against the reflex disturbances couched in the abuses above described, without having the conviction forced upon us that, in all great surgical operations—especially such as are performed in the abdominal cavity, ovariectomies for instance, where the patient is for a long time under the hand of the surgeon, and where consequently death from shock is not uncommon—atropia ought to be a certain prophylactic against its occurrence.

This suggestion can scarcely be called theoretical. The power of atropia to prevent reflex cardiac inhibition in great operations upon the frog stands demonstrated. It now remains for some enterprising surgeon to prove or disprove a similar action for it in man.

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THE MANAGEMENT OF ABORTION. By Walter Coles, M.D. Read before the St. Louis Obstetrical and Gynecological Society, April 19, 1883. Reprint from St. Louis Courier of Medicine, August, 1883.

REPORT ON DISEASES OF WOMEN, FROM THE FIRST CONGRESSIONAL DISTRICT. By R. J. Nunn, M.D., Savannah, Ga. Reprint from the Transactions of the Medical Association of Georgia. J. P. Harrison & Co., Printers, Atlanta, Ga.

WEEKLY HEALTH BULLETIN for week ending Saturday, August 4, 1883. Issued by the Provincial Board of Health of Ontario. Dr. H. P. Bryce, Secretary.

ILLUSTRATED MEDICINE AND SURGERY, Vol. II, No. 3, July 1883. Quarterly. Edited by Geo. Henry Fox and Frederic R. Sturgis. New York: E. B. Treat, No. 757 Broadway.

This number contains the following articles: Plastic Operation on the Face, Alfred C. Post, M.D.; Double Congenital Dislocation of the Hip, Henry B. Sands, M.D.; Sarcoma of the Anterior Mediastinum, C. F. Bevan, M.D.; Cancer of Breast, Ulceration and Dissemination of Nodules, G. H. Fox, M.D.; Malformation of the Extremities, J. H. Pooley, M.D.; Operative Treatment of Bow-leg and Knock-knee, Chas. T. Poor, M.D.; Still Birth from Unusual Cause,

E. T. Partridge, M.D.; Apparatus for Fracture of Lower Jaw, J. S. Wight, M.D. The articles are well written and freely illustrated, the excellence of the large colored plates which form a prominent feature of the publication being fully maintained.

AMERICAN JOURNAL OF INSANITY. Vol. XL, July 1883, No. 1. Utica: N. Y. State Lunatic Asylum. Jno. Wiley & Son, Astor Place, New York.

We congratulate our old friend upon its ripe age and wide sphere of usefulness, and wish it God-speed as it begins its fortieth volume. No journal in this country has done more for the advancement of the specialty which it represents.

FISH AS FOOD. By Sir Henry Thompson. One of the papers of the Conferences of the Great International Fisheries Exhibition. London: William Clowes & Sons, 13 Charing Cross, S. W.

This is a practical and common-sense discussion of an important question, by a gentleman of high scientific attainments. The subject is viewed from a physiological standpoint, and the advantages of a fish dietary over one of flesh for certain invalids, the aged, and men of sedentary habits, would seem to be made plain. In fact, the reader will find the address interesting throughout, thoughtful, logical, perspicuous, and graceful, as the compositions of its distinguished author are ever wont to be.

A few extracts from the address may be found among our selections for this issue.

REPORT ON REGISTRATION OF THE PHYSICIANS OF LOUISIANA, in accordance with act of October 31, 1882. By S. S. Herrick, M.D., Secretary and Treasurer of the Board of Health of Louisiana. New Orleans: E. A. Branado. 1883.

A CONTRIBUTION TO THE STUDY OF NEGLECTED LACERATIONS OF THE CERVIX UTERI AND PERINEUM. By Thomas A. Ashby, M.D., Professor of Obstetrics, Woman's Medical College of Baltimore, etc. Read before the Clinical Society of Maryland, May 4, 1883. Reprint.

HOT WATER.—If your doctor prescribes hot water for your dyspepsia, and it does no good, do not throw it up to him.—*Padman.*

BORAX is one of the best of roach exterminators. It should be powdered and sprinkled around infested places.

Correspondence.

LONDON LETTER.

Editors Louisville Medical News:

Last week the sessions at the various hospitals closed, and examinations are now being held. The board of examiners for membership of the R.C.S. has also been in session for some time, and at last report more than fifty per cent of the applicants (a good many of whom were Americans) had been *plucked*. The operations at the hospitals, however, were of more than usual importance.

At the University College Hospital, Mr. Heath amputated an arm at the shoulder-joint, together with the entire scapula, and a portion of the clavicle, for osteo-sarcoma; the patient, a lad eighteen years old, was doing very well indeed, to-day. He also removed the left half of the tongue, for epithelioma, of a man forty-seven years old; the operation was done through the mouth, with scalpel and ecraseur, ligating several vessels with catgut. An operation for entogonyancon, patient fourteen years old, was done by making an incision down to the bone, just above the condyles, and cutting the bone with a chisel sufficiently to insure its fracture easily and at the right place, then snapping the bone in two; the limb was dressed in Dr. Hamilton's apparatus. He also amputated a thigh at the upper and middle thirds, and another in the lower third. At the same hospital Mr. Hill operated for "secondary aneurism" in the axilla; the sub-clavian was ligated for primary aneurism two years ago; the operation was very tedious, and the loss of blood enormous; the tumor was cut down upon and laid open without any attempt at ligation or compression. He also operated for vesico-rectal fistula of several years standing.

At the London Hospital Mr. Tay trephined the right parietal bone a little above and anterior to its center, at the seat of an old injury, to relieve a man thirty-eight years old of epilepsy. At Middlesex Hospital Mr. Lawson operated for strangulated (?) hernia; the patient had never vomited nor failed to pass his feces; the sac was laid open and a quantity of somewhat congested omentum removed.

At Guy's Hospital Mr. Bryant operated for stone by the *semi-lateral* method, entering the membranous portion of the urethra, using a very slightly curved staff. At the

same hospital Dr. Durham removed an adenoid tumor of the breast, and in his lecture advocated very strongly the importance of removing all tumors of the breast as early as possible, regardless of their character. The senior-house surgeon, Dr. Simson, removed the tongue entire, of a man forty-four years old, for epithelioma of a few months' existence; the operation was done through the mouth, with scissors, hemorrhage being controlled by torsion, except in one vessel which was tied. Just before the completion of the operation the man stopped breathing, and after artificial respiration and elevation of hips and lower extremities seemed a failure, the doctor performed tracheotomy and introduced a tube so dexterously that it brought forth a general cheer; the patient soon began to whistle through his neck.

At King's College Hospital Prof. Lister operated for ventral hernia, three inches below the umbilicus, caused by suppurative peritonitis. He made an elliptical incision down to the sac which was carefully dissected out and the edges of the peritoneum were very carefully brought together, by the modified glover's stitch, with fine catgut; the external wound was closed with a few large catgut sutures. He also operated for cleft palate, hemorrhoids, and a tumor of the breast. At the same hospital Mr. Smith amputated the thigh, and operated for a fractured patella by bringing the surfaces together and uniting them with silver wire. He also operated three times for fistula in ano.

At the Royal Ophthalmic Hospital (Moorfield's) the number of operations, as usual, was large and varied. The above operations were noted at *one* visit to each of the hospitals.

WILLIAM HARVEY HARDISON.

AMERICAN DERMATOLOGICAL ASSOCIATION.

Editors Louisville Medical News:

The Seventh Annual Meeting will be held at the Sagamore House, Green Island, Lake George, on Wednesday, Thursday, and Friday, August 29th, 30th, and 31st. Papers will be read by the following gentlemen: Drs. Piffard, Hyde, Graham, Stelwagon, Robinson, Duhring, Atkinson, Sherwell, Bulkley, and Van Harlingen.

ARTHUR VAN HARLINGEN, M.D., Sec'y.

Translations.

FISH AS BREEDERS OF THE BOTHRIOCEPHALUS LATUS.—Dr. J. Comby. (Translated from *Le Progrès Médical*, by M. A. C.): The bothriocephalus latus, though more rare in Paris than the unarmed tenia, is, however, not infrequently met with in this place. At the Hospital Medical Society, on the 25th of March, Mr. Tenneson presented three specimens of the bothriocephalus, all from the same patient, and Mr. Duguet a fourth.

The patients from whom these were obtained were natives of Geneva. In both cases the parasites were brought away through the action of the extract of male fern. Neither pomegranate rind nor pelletierine were given, because, in the opinion of these physicians, these medicines have less effect upon the bothriocephalus than upon the tenia solium.

The bothriocephalus is not a native of France. Whenever it is found here, it is certain that the individuals afflicted have lived for some time in Switzerland (especially in Geneva), or other states where the parasite is indigenous. It would seem to be especially common in regions about the large lakes of Russia.

Dr. Max Braun, of Dorpat, has published an excellent work upon the origin and transformation of this species of tape-worm. He found that the muscles and viscera of most of the pickerel sold in the markets of Dorpat contain the larvæ of the bothriocephalus. These fish abound in Lake Wirzjerw, Lake Peipus, and other smaller lakes in the vicinity of Dorpat. The same parasite was also found in the pickerel of Lake Ladoga, while the beautiful pickerel of Lake Novgorod were entirely free from its embryos.

Being anxious to prove that these fish give the bothriocephalus to the inhabitants of these regions, he made numerous trials at reproducing the parasite in dogs and cats. These trials not proving conclusive, he at length found three students of Petersburg who were willing to become the subjects of experiment. These gentlemen were first purged thoroughly, that the absence of bothriocephalus' eggs from their feces might be proved, after which they each swallowed certain portions of the infected fish, promising to abstain for a given time from hard water and fish of any kind. At the end of three weeks the students began to complain of disagreeable sensations in their stomachs, and their dejecta being

submitted to careful examination, large numbers of bothriocephalus' eggs were found. This experiment was conclusive, proving that the flesh of these fish is competent to produce bothriocephali in man.

Dr. Braun admits that while pickerel only seem to be the source of the parasite in his country, it is probable that these and other fish in various parts of the world are competent to give bothriocephali and other tape-worms to man. This, however, is but one test experiment, and until others are made the physician must content himself with less satisfactory evidences of the source of the parasite, derived from clinical study. At Geneva the spotted salmon and another species (*coregonus fera*) are suspected of communicating the parasite, and it is hoped that the physicians of this place will follow the example of Dr. Braun in further elucidating the genesis and development of the bothriocephalus.

Selections.

A SUITABLE FOOD FOR THE AGED.—The question of age in relation to food, respecting which a volume would be necessary for the adequate consideration, must also be rapidly glanced at here. During the period of early growth, the supply of food both in nature and in quantity must be selected to correspond to the demand. During the period of middle life, that of maximum activity of all the functions, the nature and amount, as already intimated, of that activity must govern the selection of our dietary on principles which have already been explained. Then inevitably comes with advancing years the stage of diminished force, diminished activity, and the love of rest and quiet. The popular belief holds with curious tenacity, that the failing power of age demands increased sustenance by food. This erroneous doctrine ignores the important fact that sometimes the digestive powers, but more generally and obviously still, the ability to eliminate food unnecessarily consumed, are notably diminishing. Hence the appearance of a crowd of chronic troubles peculiar to the latter third of life, and to a great extent avoidable. So far from continuing to select the strong nourishment which may have been necessary during the toil-anxieties of thirty years or more of adult energy and activity throughout the prime of life, the elderly man, who desires to preserve

fair health and to attain to longevity, should gradually diminish his use of strong nitrogenous and much fatty food. He should substitute a lighter dietary; one in which the best forms of fish may suitably hold a conspicuous place. He subsides naturally, and more or less gradually into the class of the sedentary, and adopts the regimen best adapted thereto.—*Sir Henry Thompson, Address before the International Fisheries Exhibition, London, 1883.*

DIET FOR BRAIN WORKERS, AND OTHERS OF SEDENTARY HABITS.—It is the habit of adopting meat as the chief element of his dietary, which the sedentary man, with little opportunity for bodily exercise, the man who uses his brain more than his muscles, should especially avoid. Equally, also, should he abstain from fatty matters in large quantity, taking only a moderate proportion, which is not only permissible, but necessary to that extent. For if he habitually consumes these two classes of food freely, materials are introduced into the system which it can not eliminate, and which must ultimately obstruct the function of some internal organ. Thus the periodical bilious attack, or the recurring fit of gout, or some other relentless tormentor, clears the system for a time of the offending matter which the daily error in diet is perpetually reproducing and accumulating. Those who are thus affected often endeavor to ward off their troubles by systematic muscular exercises, fencing, rowing, and the like, and they do so with a certain amount of success. It is for the purpose of getting rid of superfluous nutritive materials that others (who may be wholly unconscious of the need which impels them) secure their yearly shootings, make Alpine excursions, or seek the mineral springs of a foreign spa; contrivances, all of them, for effecting the required elimination once or twice a year by a method more or less agreeable, but which would not be necessary had food suitable to a sedentary life only been taken. Many a man might indeed safely pursue a sedentary career, taking only a small amount of exercise, and yet maintain an excellent standard of health, if only he were careful that the "intake" in the form of diet corresponds with the expenditure which his occupations, mental and physical, demand. Let him by all means enjoy his annual pastime, and profit by it, to rest his mind and augment his natural forces, but not for the mere purpose of neutralizing the evil effects of habitual dietetic wrongdoing.

It is for this large and increasing class of the community, who are emphatically brain-workers, that fish furnishes an appropriate food; and when we reflect that the tendency of civilization here and elsewhere is slowly but surely to develop mental activity and to dispense with laborious handicraft, that all advance in individual as well as corporate well-being is commensurate with, and indeed is effected by the substitution of brain-work for mechanical labor, we may see in this great and systematic investigation of the world's fish-supply, a notable sign of the times. I regard it as a natural and necessary product of an advancing civilization, as the inevitable result of the age and its needs, and certain to have been evolved thereby sooner or later.—*Ibid.*

THE sole, the whiting, and the smelt are the most delicate fish in flavor, contain the least nutritious matter, and are the easiest of digestion, fitting them admirably to the invalid commencing after illness to make a trial of solid food; the two former being also susceptible of very varied treatment in high-class cooking for the production of elegant entrées. The turbot, rightly esteemed, is stronger food and agrees well with most persons. The cod for some is not quite so readily taken; but is not only more palatable but is sometimes more easily assimilated when "crimped." The same may be said of the salmon, a leading characteristic of which is the presence of fat. This element in fish is more apt to disagree with the stomach than fat from other sources; and on this account it is that many either avoid or eat sparingly of salmon. As the fat is chiefly found on the under side of the fish, a slice from the back only should be taken by such persons; and in the fresh crimped fish the fat is in a more wholesome state than when, on the second or third day after leaving the water, it becomes oily and acquires a slight characteristic taste and odor.

The mackerel is another oily fish, and it disagrees with some persons accordingly; so is the red mullet, but the oil is chiefly in the liver, and gives the fish its peculiar flavor and value.—*Ibid.*

COAGULATED SKIM-MILK, BUTTERMILK.—From a valuable editorial article in the *Canada Lancet*, on the Therapeutics of Buttermilk, we quote the following: Coagulated skim-milk differs but little from buttermilk in its chemical condition. It probably contains about the same quantity of fat. It is,

of course, richer in casein, and herein lies the principal difference. In fact it is almost a perfect substitute for buttermilk, after being treated in the same manner as the contents of the cream-crock, that is, agitated so as to break up and thoroughly reduce the curds, and make the whole light and frothy by admixture with the atmosphere. Not long since a lady of our acquaintance hit upon the above plan to satisfy the longings of an invalid for buttermilk, and it is to that circumstance that this article owes its origin. The season being winter, buttermilk was unobtainable. The milk was coagulated by being put in a warm place. It was agitated by a revolving egg-beater until it was light and frothy. Sour milk thus treated tastes exactly like fresh buttermilk. In view of the fact that buttermilk is hard to get at certain seasons, the value of the proposed substitute becomes apparent.

The first process milk undergoes in the stomach is the coagulation of the casein. In sour milk this is already accomplished, and that too in a more satisfactory manner. Sweet cow's milk coagulates in the stomach in the form of semi-solid cakes, which many stomachs are unable to reduce to a proper state of subdivision. In sour milk, on the contrary, the curds are loose and flaky, much resembling the curdling of human milk, which may be seen in the vomit of the over-fed infant at its mother's breast. The digestion of sour milk is made still more easy by the process of churning, by which the flaky curds are reduced to a state of fine subdivision.

Long experience has demonstrated the superior digestibility of buttermilk, and this inquiry simply furnishes the reasons. Buttermilk is a true milk peptonoid—that is the fashionable word of the day—milk already partly digested. The range of its application is therefore wide, and but little restriction need be observed in its use. It is good food and drink for young and old, sick and well. Being food, it ought not, by any one, to be taken between meals. This practice accounts largely for the common belief that buttermilk disagrees with many persons. Being an agreeable drink, it is often too freely used. Sick persons, who partake of little or nothing else, may partake much oftener and more freely. Although containing about the same quantity of nutrition as sweet milk, yet patients appear to be able to consume with ease at least double the quantity of buttermilk.

Buttermilk has at least three therapeutic

properties more or less marked. It is a decided laxative to the bowels, and this fact should be borne in mind in the treatment of typhoid. This affords a hint for its use in habitual constipation. Buttermilk is a diuretic and may be prescribed with advantage in some kidney troubles. Owing to its acidity, combined with its laxative properties, it is believed to exercise a gentle impression on the liver. It is well adapted to many of the cases where it is customary to recommend lime-water and milk. It is invaluable in the treatment of diabetes, either exclusively or alternating with skim-milk. In some cases of gastric ulcer and cancer of the stomach it is the only food that can be retained.

WATER CRESSES IN ECZEMA.—According to M. Chatin, in *Gaz. Hebdom.*, cress contains an essential oil of which the base is allyl, a bitter extract, iodine, iron, phosphorus, and certain salts. M. N. Gueneau de Mussy reports the case of a woman of sixty years who had been unsuccessfully treated, for fifteen years, for chronic eczema. The eczematous eruption had attacked the tongue and rendered deglutition painful and difficult. After using arsenic and other remedies without result, a large quantity of water cresses was prescribed every day. In five months there was very decided amelioration of the symptoms, and the eruption had entirely disappeared from the tongue. This prescription was equally efficient in another chronic case.—*Med. Times.*

GRUBS IN THE INTESTINES.—Dr. Wacker has published the case of a boy, aged twenty-one, with colicky pains, fullness of epigastrium, constipation, and frequent fits of nausea and tendency to syncope, especially when in a close atmosphere, such as that of his cottage or a stable. Dr. Wacker prescribed some Hunyadi János water, to be taken every morning on an empty stomach. On the third day a vast mass (over two liters) of larvæ, partly alive and partly dead, was passed from the rectum. The patient at once recovered, feeling no more unpleasant symptoms, even when in a hot room. On examination, the grubs were found to be larvæ of a common dipterous insect, *anthomyia cuculinæ*, closely allied to the house-fly and blue-bottle fly.—*Med. and Surg. Reporter.*

ALCOHOL has been truly called the "genius of degeneration."